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**MEMORANDUM OF UNDERSTANDING  
BETWEEN THE  
FEDERAL AVIATION ADMINISTRATION  
AND  
INCORPORATED COUNTY OF LOS ALAMOS, NEW MEXICO**

The owner/ sponsor, the Incorporated County of Los Alamos, New Mexico having installed the (LAM) (Facility Identifier), Automated Weather Observing Systems (AWOS) at the Los Alamos County Airport, Los Alamos, New Mexico, hereby accepts the enclosed Operation and Maintenance Manual (OMM) as approval by the Federal Aviation Administration (FAA). The undersigned agrees to operate and maintain the above facility in accordance with all FAA requirements, standards and criteria governing such facility, including those requirements contained in the enclosed OMM.

The FAA reserves the right to change/ amend the OMM to reflect changes in FAA operating policies and procedures. The changes/ amendments shall be effective after 10- day notification to the sponsor. At any time, that the undersigned or persons named in the OMM are no longer performing the functions indicated the FAA should be notified within 10 working days.

The undersigned understands that noncompliance with the above requirements will be grounds for reporting the facility out-of-service and/or cancellation of FAA approved instrument flight rule procedures.

With regard to any liability which may arise from the use and/or operation of this facility, each party expressly agrees that it shall be solely and exclusively liable for the negligence of its own agents, servants and/of employees in accordance with applicable law and that neither party looks to the other to save or hold it harmless for the consequences of any negligence on the part of one of its own agents, servants and/ or employees.

**OWNER/ SPONSOR:**

INCORPORATED COUNTY OF LOS ALAMOS

Signature: Max H. Baker for  
(Owner or Designated Representative)  
Donna M. Dreska  
County Administrator

Date: 10/7/03

**FEDERAL AVIATION ADMINISTRATION:**

Signature: Michael A. Gonzales  
Michael A. Gonzales  
Manager  
Rio Grande System Management Office  
(FAA Representative)

Date: 11/5/03



# OPERATION AND MAINTENANCE MANUAL

## CONTENTS

Sections:		Pages:
I.	Operational Requirements	3
II.	Maintenance Requirements	6
III.	Aircraft Accident/ Incident Procedures	8
IV.	Nonfederal Facility Data	10

## PART I

### OPERATIONAL REQUIREMENTS

The following requirements are required to operate a facility in the National Airspace System. Failure to comply with these requirements will result in withdrawing of approval for use of the facility.

#### A. Licensing.

1. Facility. The posting of the Federal Communications Commission (FCC) license at the facility is required. The station license is valid for five years, after which time it is renewed. To apply for a facility FCC license, submit FCC forms 601 with appropriate schedules tilted: Application for Wireless Telecommunications Bureau Radio Service Authorization. FCC application forms are available by contacting the FCC office at (1-800-418-3676) or visit their web site at [www.fcc.gov/formpage.html](http://www.fcc.gov/formpage.html). It is highly recommended to renew your station license 90 days before expiration. When you do receive the renewed license, forward a copy to the FAA Rio Grande System Management Office (RIO SMO) for our records.
2. Maintenance Technician. The equipment shall be operated and maintained only by persons duly licensed by the FCC and approved by the FAA respectively.
  - a. A general- class, radiotelephone operator license satisfies the FCC requirement. Our office will need a copy of this license.
  - b. FAA approval is contingent upon the successful completion of the following:
    - (1) FAA or FAA approved manufacturer's school, or satisfactory completion of a concept exam administered by a representative of the FAA. The satisfactory completion of the concept exam precludes the necessity of the residency training.
    - (2) Performance exam is to be given by a representative of the FAA.
  - c. One who meets the requirements of 2.a. and 2.b. above, is granted verification authority from our office to maintain the AWOS equipment. Failure to comply may result in noncompliance and will be grounds for NOTAMing the facility out-of-service and/or cancellation of FAA approved instrument flight rule procedures.

#### B. Notice to Airmen.

A Notice to Airmen (NOTAM) contains the establishment, condition, or change in any aeronautical facility, service, procedure, or hazard, the timely knowledge of which is essential to personnel concerned with flight operations. Any deviation from normal operation or failure of this facility requires a NOTAM. Pilots or other persons detecting the irregularity shall notify the sponsor and the technician responsible for the equipment maintenance immediately of reports concerning irregular operation of this facility. The sponsor, or the authorized representative, shall ensure that a NOTAM issued through the associated Automated Flight Service Station.

The sponsor, or the authorized representative, will ensure notification of the applicable Airways Facility Offices by phone during normal office hours as listed in Part IV to report any such failure or deviation exceeding or expected to exceed 24 hours.

C. Monitoring.

It is FAA policy requires remote- monitoring system for electronic navigational facilities used in the support of instrument flight procedures. Suitable monitoring equipment shall be provided at the appropriate location to enable detection of any of the following conditions:

1. Malfunction or failure of the monitor equipment.
2. Malfunction or failure of the AWOS.

D. Shutdown for routine maintenance.

Maintenance should be performed only when the following conditions exists:

1. Interruption to service is limited to VFR conditions, daylight hours, and periods of light traffic when possible.
2. The interruption of service shall be coordinated with the appropriate Air Traffic Control Facility (Automated Flight Service Station, Air Traffic Control Tower etc.). A NOTAM request shall be coordinated so that the notice of shutdown or interruption will be published in advance of the proposed interruption. Facility service shall not be interrupted without Air Traffic approval.
3. A NOTAM shall be in effect announcing the scheduled interruption, and the facility will not be shutdown until that specified time has arrived. The advance notification of the interruption will state a specific period for the interruption to occur.

E. Required Support Items.

1. Test Equipment. The sponsor, or his representative, shall provide approved test equipment needed for the maintenance of the facility. Test equipment shall be calibrated in accordance with the schedule submitted to (and approved by) the FAA. Test equipment calibration shall be traceable to National Standards, and proof of calibration (i.e. a current calibration sticker) shall accompany each piece of test equipment.
  - a. Test Equipment Calibration Standards. Standards shall be calibrated at periodic intervals established for stability, purpose, and degree of usage. Intervals may be shortened as required to assure continued accuracy as evidenced by the results of preceding calibrations. It may be lengthened only when the results of previous calibration provide definite indications that such action will not adversely affect the accuracy of the system. The standard calibration interval shall be within 12 months.
  - b. Repair of Standards. Test equipment will be recalibrate whenever it is repaired.

2. Records. Calibration records shall be maintained for a period of not less than three consecutive calibrations on each instrument calibrated. These records shall contain:
  - a. A list of the equipment used to calibrate each test equipment unit, including the manufacturer, model number, serial number, and calibration date.
  - b. The procedure used (reference to the manufacturer's instruction manual will suffice provided title and date of issue are included).
  - c. Data consisting of all reading taken on each parameter before adjustment (as found data) and after adjustment (as-left data), and all adjustments made.

#### F. Emergencies

1. Military. In a case of national defense alert, the facility shall be shut down in the shortest possible time after the alert is received from the air traffic facility. It shall remain off the air until official notice is received that the alert is over.
2. Aircraft Accident. Part III of this manual provides guidance in case of an aircraft accident.

#### G. Adjustments of Equipment through Remote Maintenance Monitoring (RMM).

Any Non-Federal Facility having RMM adjustment capability shall have an associated printer, which documents all maintenance activities. This printer shall make records for the review of visiting FAA personnel of all log-on and equipment adjustment, which may be initiated, from a remote terminal. Printouts are kept a minimum of 2 years before being discarded. In the event that maintenance activities cannot be recorded on a printer, the sponsor shall provide written logs, which documents all adjustment of equipment through RMM. Logs will be maintained a minimum of 2 years before being discarded.

## PART II

### MAINTENANCE REQUIREMENT

#### A. General

1. The AWOS facility shall be maintained in accordance with the manufacturer's operation system logbook, maintenance technical handbooks, and the following FAA orders.

AC 150/5220-16 C	Automated Weather Observing Systems (AWOS) for Non-Federal Applications
Order 6000.15 C	General Maintenance Handbook for Airways Facilities
Order 6200.4F	Test Equipment Management Handbook
Order 6560.20 B	Siting Criteria for Automated Weather Observing Systems (AWOS)
Order 6580.5	Maintenance of Remote Communication Facility (RCF) Equipment
Order 6700.20 A	Non-Federal Navigational Aids and Air Traffic Control Facilities
Order 8020.11 B	Aircraft Accident and Incident Notification, Investigation, And Reporting

NOTE: The Maintenance schedules and requirements contained in these publications are considered the minimum level of maintenance.

2. The FAA will provide forms and publications required for maintenance of the facility.
3. If a maintenance technician is not available for any reason or if, the maintenance schedules set forth in FAA maintenance procedures (see above) are not adhered to; the equipment shall be removed from service unless the owner or his designated representative has coordinated the exact circumstances with the FAA.
4. Facility equipment performance and adjustment data forms shall be filled out at the time of facility commissioning. One copy must be kept in the permanent records of the facility and one copy must be sent to the RIO SMO office. The owner or his representative must revise that data after any major repair, modernization, or adjustment to reflect an accurate record of facility operation. In the event, the data is revised, the owner or his representative must notify our office of such revisions, and forward copies of the revisions to us within 30 working days.

5. Facility Maintenance Logs. FAA form 6030-1, is a permanent record of all the activities required to maintain the facility. The entries must include all malfunctions encountered in maintaining the facility, including information on the kind of work and adjustment made, equipment failures, causes (if determined) and corrective action taken. In addition, the entries must include completion of periodic maintenance required to maintain the facility and NOTAM information. A FAA representative will conduct an onsite annual log review.

This review shall address log procedural or policy discrepancies, technical completeness, detection of facility performance trends, and recurring malfunctions. Noted logging discrepancies shall be brought to the attention of the person making the entry in the interest of corrective instruction. The owner or his representative will keep both the white and yellow copy of each form until the annual log review. At that time, the FAA representative collects all yellow copies. Among the most important entries in the facility maintenance logs are those indicating the verification status of a system, subsystem, or equipment. For the purpose of this agreement, the word certification used in FAA directives shall be synonymous with verification. Verification statements shall be entered in the facility maintenance log (FAA Form 6030-1) in accordance with appropriate FAA directives and orders. A verification statement shall also be made before returning a system, subsystem or equipment to service after said system has been out-of-service due to hardware or software failures.

6. Technical Performance Records, FAA form 6XXX-XX, contains a record of system parameters recorded on each scheduled visit to the facility. The sponsor, or his representative, shall keep the original of each quarterly record at the facility. A copy of the form should be sent to the appropriate FAA office (or the FAA Inspector during the annual inspection at his option may pick them up).
7. Improvements in maintenance procedures or equipment brought about by system growth to improve the service provided to the flying public, shall be funded and incorporated by the sponsor following approval by the FAA.
8. The sponsor shall submit to the FAA for approval any proposed modifications to the facility and shall not permit any modification to be performed without specific FAA approval.

#### B. Physical Security.

The facility shall be kept locked at all times. Protection shall be provided to ensure that unauthorized personnel do not have access to the equipment.



C. Ground Inspections.

1. FAA technical ground inspections will be accomplished on an annual basis or as otherwise required. Prior notification of ground inspection will be given to the sponsor or its representative.
2. The annual log review may be conducted in the annual ground inspection.
3. FAA may conduct a follow up inspection when a facility may have been a factor in an aircraft accident/ incident. (see Part III)

D. Safety.

OSHA requirements should be followed to assure safety. Vegetation shall be controlled to allow access to the facility.

### PART III

#### AIRCRAFT ACCIDENT/ INCIDENT PROCEDURES

A. Notification.

Upon a determination by the FAA that a Non-Federal facility may have been involved in an aircraft accident/ incident, the FAA will notify the sponsor.

B. Data Archiving.

In case of an aircraft accident/ incident occurring at the Los Alamos County Airport, Los Alamos, New Mexico, FAA will notify the sponsor within 24 hours of the accident or incident. The sponsor will provide a hard copy report of all available archived AWOS data.

C. Facility Evaluation.

The facility maintenance log (FAA Form 6030-1) will be reviewed at this time. The Non-Federal facility technician and the sponsor, or his representative, shall promptly evaluate the performance of the facility in accordance with procedures outlined in FAA Order 8020.11B and the applicable maintenance technical handbook or other approved instructions. The FAA shall act as an observer to this evaluation unless waived by the FAA Airway Facilities Aircraft Accident Representative. When the requirement for the FAA observer is waived, the FAA will inspect the facility within a reasonable period (usually 72 hours) of the accident.

The evaluation team shall measure and record "as found" data required by the maintenance technical handbook(s) or other approved instructions. **NO ADJUSTMENTS SHALL BE MADE WHEN COLLECTING REQUIRED DATA.** Should any measurements exceed standards or tolerances, the FAA Airway Facilities Aircraft Accident Representative shall be notified and a determination will be made regarding temporary removal of the facility from service and/or the need for flight inspection.



Documentation Requirements.

All required data shall be entered on applicable FAA Form 6XXX-XX and FAA form 6030-1.  
The following statement shall be entered on these forms:

I certify that the above is a true record of the "AS FOUND" conditions of:

The \_\_\_\_\_ at \_\_\_\_\_  
(Facility Identifier and Type) (Date and Time)

Signature: \_\_\_\_\_  
(Facility Technician)  
\_\_\_\_\_  
(Title)

Signature: \_\_\_\_\_  
(Sponsor or Representative)  
\_\_\_\_\_  
(Title)

Signature: \_\_\_\_\_  
(FAA Observer)  
\_\_\_\_\_  
(Title)

**PART IV**  
**NON-FEDERAL FACILITY DATA**

**A. FACILITY**


1. Type: AWOS III P
2. Identifier: LAM
3. Facility Name: Automated Weather Observing System Type III P
4. Airport Name: Los Alamos County Airport
5. Directions to Facility: The LAM AWOS III P is located on airport property.  
Within the city limits of Los Alamos, NM. On State  
Highway 502 (main strip), exit onto Airport Road.  
The Address is 1040 Airport Road.
6. Facility Elevation (MSL): UHF: 7150' / VHF: 7084'
7. Facility Elevation (AGL): AWOS III P Tower (VHF): 33'
8. Longitude: UHF: 106 Deg. 15' 38" W / VHF: 106 Deg. 15' 38" W
9. Latitude: UHF: 35 Deg. 52' 44" N / VHF: 35 Deg. 52' 44.38" N
10. Frequency: 124.175 MHz (VHF AWOS Transmitter)  
458.9375 MHz (UHF AWOS Monitor Link)
11. Authorized Power: 2.5 Watts (VHF AWOS Transmitter)  
1.0 Watts Maximum (UHF AWOS Link)
12. FCC Licenses: AWOS VHF Transmitter; 843717 Expiration Date: 03/22/2005  
AWOS UHF Link; 9811A028884 Expiration Date: 03/04/2004
13. Telephone Answering System: (505) 662-8423

**B. EQUIPMENT**

1. Equipment Manufacturer: Vaisala Artais Division
2. Radio Transmitter Manufacturer: Park Air Electronics Ltd.
3. Transmitter Model: VHF: (Park Air Electronics Ltd. Model 4004)  
UHF: (TEKK, Inc. Radio Modem Model T-NET Mini)
4. Internal Monitor/ Shutdown: YES
5. External Monitor/ Shutdown: YES
6. Receiver Manufacturer: UHF: (TEKK, Inc. Radio Modem Model T-NET Mini)  
VHF: NONE
7. Antenna Type/ Model: UHF: Omnidirection Mast  
VHF: Omnidirectional Mast
8. Standby Power (Type): YES, Uninterruptible Power Supply

## C. CONTACTS

1. Sponsor: County of Los Alamos, Los Alamos, New Mexico
2. Sponsor's Representative:
  - a. Name/ Title: Kyle Zimmerman/ Engineering and Projects Manager
  - b. Telephone Number: (505) 662-8150
  - c. Address: Los Alamos County  
Engineering and Project Management  
P.O. Box 30  
Los Alamos, New Mexico 87544
3. Facility Technician:
  - a. Name/ Title: Geoffrey G. Hella
  - b. Telephone Numbers: (505) 837-0027
  - c. Address: 6800 Pino Arroyo Ct. NE  
Albuquerque, New Mexico 87111
4. Person in charge of monitoring location:
  - a. Name/ Title: Bruce Hudspeth/ Airport Operation Manager
  - b. Telephone: (505) 662-8420 / 8421
  - c. Address: Los Alamos County Airport  
1040 Airport Road  
Los Alamos, New Mexico 87544
5. Associated AFSS/ Telephone: ABQ AFSS/ 1-800-525-9963 (New Mexico)
6. Associated Airway Facility Office/ Telephone:
  - a. Name/Title: Michael A. Gonzales / Manager,  
Rio Grande System Management Office (RIO SMO)
  - b. Telephone: (505) 856-4700
  - c. Address: Federal Aviation Administration  
Rio Grande System Management Office  
2445 Alamo Ave. SE.  
Albuquerque, New Mexico 87106

7. Other (As quired):

a. Name/ Title: FAA /MOCC

b. Telephone: 1-(866) 432-2622